



THE FAR-B NEWS

Dedicated to promoting the research and education programs of the
Henry A. Wallace Beltsville Agricultural Research Center, Beltsville, Maryland

Friends of Agricultural Research-Beltsville, Incorporated P.O. Box 1061, Beltsville, MD 20704-1061

JANUARY 2011

Editor: Hank Becker

President's Message

Dear Friends and Colleagues,

I hope this finds that the past year treated you well and that you are more than ready for the new one.

At the January 11 meeting of the FAR-B Board of Directors we put the final touches in place for launching the FAR-B Summer Internship program. Beginning this fiscal year FAR-B will provide funding in the amount of \$2,500 toward a summer intern for a permanent scientist in each of the three Institute/Centers located at BARC. A committee composed of three scientists within each Institute/Center will evaluate the applications and select the applicant they believe will provide a student intern the best opportunity

to interact and learn about agriculture research in a laboratory setting. It is our sincere hope that these internships will provide meaningful research experiences for academically promising high school senior or college students so that they will consider science/agriculturally-related careers when they complete their formal education.

Once again a group of FAR-B members will be judging Middle School Science Fair projects in Howard, Montgomery, and Prince George's Counties. This has been one of our outreach activities for the past five years. There are lots of very bright boys and girls at these science fairs, and we believe our small cash awards and certificates helps keep them interested in science. If you're interested in helping out

Come Join Us on Friendship Day

Meet your friends in FAR-B/BARC
Enjoy some snacks, walk through the extensive garden and just chill out . . .
There will be door prizes!

Sunday, June 26, 2011 • 1:00 – 5:00 p.m.

at the home of: The Hammerschlags

7106 Deer Valley Road, Highland, Maryland 20777 • Phone: 301-854-2674

Off of Mink Hollow Road, between routes 216 and 108 • Please park at top of hill and walk down to house

\$12 donation per person (children under 18 free) • All proceeds to support the 2011 BARC Research Programs

Make checks payable to: FAR-B, or pay by credit card online at: www.far-b.org/friendshipday.html

Send by Friday, June 10, 2011 to:

FAR-B
P.O. Box 1061
Beltsville, MD 20704-1061

Name(s): _____
E-mail address: _____
In lieu of attendance, please accept my donation of \$ _____

please call or send me an email. We can use your help, and I guarantee you will enjoy visiting with these youngsters about their projects.

In April, FAR-B will again be hosting the luncheon for the BARC Poster Day and presenting awards to the top three posters that will be presented by the High School Interns that are working in various BARC laboratories.

In May, we hope to see you at the FAR-B Annual Meeting, which is tentatively scheduled for May 10.

Another event that I hope you will keep in mind is the 2nd FAR-B/BARC Friendship Day that is scheduled for Sunday, July 26. It will once again be held at the lovely home and spacious yard of Freddi and Dick Hammerschlag.

In closing, please remember that it's time to send in your membership dues, which are quite essential for FAR-B to continue our support of various activities at BARC.

Vernon Pursel, President

Area Director's Message

Best wishes for 2011 to the FAR-B community. The past year has been an exciting year for the Beltsville Area and we look forward to the coming year. Beltsville Area scientists continue to be recognized worldwide for their outstanding research success and this success would not be possible without the support of all of the staff in the Area. Their dedication is seen everywhere and is much appreciated.

Despite our many successes, there are an increasing number of challenges on the horizon. We have a work force made up of a growing number of retirement-eligible employees. Replacing them will be a major challenge in the coming years. While we have seen decreases in the number of employees in the Area, we have been successful in carrying out our mission and delivering a tremendous return on investment by the public. We have filled a number of key positions in the Area including several Research Leader vacancies, scientist vacancies, and a

new Technology Transfer Coordinator. Of note, we have a new Director of the U.S. National Arboretum. She is Dr. Colien Hefferan who brings a wealth of experience and expertise to the position; her leadership at the Arboretum has already been evident and is much appreciated.

It is that time of the year that we are awaiting the release of the President's budget for 2012 and yet we are still operating on a Continuing Resolution for the 2011 Fiscal Year and the ensuing uncertainty associated with it. Both the Administration and the new Congress have a challenge to keep spending down and will no doubt take a careful look at discretionary spending as part of the budget process. No one knows how this process will play out. While I expect the next few years will be challenging, I know that Beltsville is well positioned despite the uncertainty we are facing. Beltsville Area scientists are actively involved in, and in many cases leaders in, many of the Department's priority areas. The need for safe, readily available, and nutritious foods that are protected against emerging threats is not going to disappear. As long as the research conducted in the Beltsville Area continues to be relevant and at the cutting edge of agricultural research, I am convinced that we can build on the strong legacy of research that exists here.

When I was appointed as Director of the Beltsville Area in 2008, I wrote in the FAR-B newsletter that we faced internal and external challenges. In three years, I believe that everyone in the Area has been successful at meeting many of the internal challenges. I am pleased to see that indirect costs have decreased, improvements to the physical facilities have taken place, staff have found ways to save energy, and there have been increases in productivity. I think the team effort that we have taken to respond to our internal challenges will serve us well to address the external challenges on the horizon. Regardless of our budget, I know BARC will continue to conduct the best research program possible with the funding we are provided.

As always, I am sure I speak for everyone in the Beltsville Area in thanking FAR-B for its incredible support.

Joseph Spence, Area Director

Financial Report

In 2010, FAR-B had income of \$17,557 and expenses of \$8,612 for a net income of \$8,945. Income consisted of dues (\$4,458), donations and dues paid through the Combined Federal Campaign (\$6,176), direct donations (\$2,700), interest and dividends on reserve funds and investments (\$2,949), fund raising activities (\$1,235) and other (\$39). Income from CFC was nearly \$900 higher than in 2009, but all other categories of income were lower than the previous year. Donations were highlighted by a very generous gift of \$1,359 from the BARC COED Softball League, which had ceased to operate. The main fund raising activity this year was the annual poinsettia sale.

Activities supported this year included the Science Enrichment programs at the Beltsville Academy in May by Jim Anderson and Al Stoner and in September with the week-long collaboration with the Maryland Agricultural Education Foundation; the 21st Annual BARC Poster Day April 21; participation in the BARC Field Day June 10; awards presented to winners at middle school science fairs in Howard, Montgomery and Prince George's Counties; special programs at BARC including Women's History Month, Leaders of Tomorrow, grand opening of the Student Discovery Garden, and a reception celebrating J. P. Dubey's election to the National Academy of Science; a recertification site visit at the BARC Animal Care Facility; and an in-depth Laboratory Review (APDL). Administrative expenses were \$1,349, which included the FAR-B annual meeting and luncheon, printing and mailing two newsletters as well as dues notices, post office box rental, postage and supplies. Fund raising expenses were \$734.

Richard Zimmerman, Treasurer

Kids Explore Agricultural Science On Wheels

Ahhh! Remember the days of taking classroom field trips? Bet you never had one like this—a virtual visit by a classroom on wheels that drives right up to the school!

Such was the recent treat for K-5 students at Beltsville Academy in Beltsville, MD, just down the road from BARC.

Over the past several years, BARC and FAR-B have coordinated numerous science enrichment programs at Beltsville Academy (formerly Beltsville Elementary School) to help kids learn more about agricultural science. This fall, they teamed up with the school and the school's PTA to sponsor a visit from the Maryland Agricultural Education Foundation's "Agricultural Products" mobile science lab.

Retired science teachers skilled in making science "come alive" promote the importance of agriculture in our daily lives, and conduct experiments featured on the lab's kid-sized workbenches.

Younger students heard a story about cows, talked about dairy foods, made butter from heavy cream ("shaka, shaka, shaka" for an arm-exhausting 10 minutes), and then taste tested their experiment on graham crackers.



Student separates curds from whey.



Young chemists in action.

Older students played “chemist,” producing glue from milk and then testing its strength against a commercial variety using several objective tests. Problem, hypothesis, procedure, results, conclusion—the scientific method in action!

Now I remember having great fun making paste with flour and water—it even makes great wallpaper glue. But this one from milk was new to me. Basically, you separate the curds by adding vinegar, discard the whey, add hot water and baking soda to the chopped curd, then mix until smooth. The results? I overheard a 3rd grader say, “I’m going to save my glue so we don’t have to buy it anymore.”

The school’s principal, Mrs. Rashida Edwards, praised the program. “This was a great experience for the kids. It reinforced the importance of agriculture in our daily lives, showed how science can be fun, and you just never know what might motivate kids—maybe we’ve even inspired some future scientists!” Maybe even some for BARC!

Dianne Odlan, Liaison, ARS Info Staff

BARC Dedicates Student Discovery Garden

BARC has a brand new educational-outreach attraction for students of all ages—but especially for science-minded middle- and high-school aged students. Named the “Student Discovery Garden”, the artfully laid out attraction was opened officially

at a September 8 ceremony attended by BARC Director Joseph Spence, locally based agriculture department officials, FAR-B members, a special BARC task force that planned and created the discovery garden, and, appropriately, a goodly representation of local students, some of them home-schooled.

BARC research plant physiologist Lewis Ziska headed up a special BARC task force on diversity and educational outreach charged with creating the discovery garden. The task force went about its work with several inter-related goals in mind, said Ziska. One goal is to demonstrate the depth and resourcefulness of BARC agricultural research. After all, Ziska says, food doesn’t magically appear on the shelves or in the coolers of supermarkets. Food arrives after great expenditure of hard work and investment. Scientific progress from agricultural research is a central to the food production equation. That is one point for the garden to drive home, he said.

Ziska explained that BARC is following First Lady Michelle Obama’s lead of using a garden as a teaching tool for urban kids. Agriculture Secretary Tom Vilsack has challenged the department to build gardens that help young people understand how hard it is to produce food and yet how much fun growing food can be. More, the Secretary says, gar-



PHOTO: JIM PLASKOWITZ, BELTSVILLE AREA TECHNOLOGY SECTION

Science and Technology student Adama Ariguzo, of Charles Herbert Flowers High School, checks out the Student Discovery Garden.

dens can encourage young people to become more nutritious eaters.

The student discovery garden features seven sections. Each section displays a special subject of BARC research. Sections have such catchy titles as: Nutrition and Carrots, Birds and Bees in the Garden (Pollination), Native Crops in the Americas, and Urban Gardening (which may mean anything from growing food in containers to window boxes). Each section features a poster providing educational information. A three-foot wide sidewalk permits easy, close-up access to exhibits. The garden is free of pesticides and herbicides. Planting beds contain only sterilized soil, as a protective measure for the middle-school students who are expected to be the predominant age group served by this teaching tool.

One goal, Zizka said, is to recruit young scientists. If the United States is to continue feeding its ever expanding U.S. population--not to mention growing food exports for a hungry world--agricultural research is going to need the best and the brightest scientists. We need to attract interest and commitment while students are young, Ziska said. Studies show that young people begin to sort out their life's goals during middle school. That is a reason why we have specially targeted the student discovery garden toward middle school students, he said.

Another goal is to bring more diversity to agricultural research. BARC Outreach Coordinator Jenny Allen is reaching out to schools with an eye to attracting minorities and other under represented groups to agricultural research. Adamma Ariguzo (see a nearby photo of a smiling Adamma in the Student Discovery Garden) could in a sense be a poster child for future agricultural scientists. At the moment, she is a senior in the Science and Technology program of the Charles Herbert Flowers High School, a comprehensive Prince George's County Science and Technology magnet school in Springdale, Md. Could Adamma Ariguzo become a future Lew Zizka; is she a distinguished agricultural scientist in the making? The fullness of time will answer those questions.

For more information on the Student Discovery Garden, visit BARC on-line at http://www.ars.usda.gov/main/site_main.htm?modecode=12-00-00-00. Click on "Student Discovery Garden," just below the photo of BARC's landmark clock tower building. There you will find Lewis Zizka's full article on the garden. If you should be interested in volunteering to help at the garden, perhaps talk to visiting school groups, check back from time-to-time. BARC has in the works a link that will describe how to pursue volunteer interest. For the present, inquiries may be directed to the National Visitor Center, 301-504-

THANK YOU FAR-B FOR YOUR FINANCIAL SUPPORT

Dear FAR-B membership,

The Beltsville Area Diversity Taskforce would like to extend a sincere "Thank you" for your organization's support of our recent endeavors. Our group has taken on the mission to provide support and leadership to the Beltsville Area Administration to ensure that the research mission of the Agricultural Research Service is preformed at the highest scientific level possible. The creation and maintenance of a workforce that represents the nation's and surrounding community's increasingly diverse population will ultimately aid in the achievement of that goal. We have recently had great success in the implementations of such outreach programs as Cultural Heritage Month celebrations, the establishment of a Student Discovery Garden, and the development of a graduate student symposium which includes

1890 Land Grant Institutions to focus solely on critical agricultural research issues. **FAR-B members** have helped make all of these endeavors successful with their constant support. We anticipate that our efforts will inspire a diverse community of future scientists to see the wealth of possibilities in Agricultural Sciences and FAR-B will be an integral part of that achievement.

We applaud your dedication to promoting the importance of Agricultural Science through outreach. We look forward to future collaborations.

Thanks,
Vernetta L. Gaskins
Beltsville Area Diversity Taskforce, Chair
Plant Sciences Institute / Food Quality Laboratory

9403, e-mail NVC@ars.usda.gov for information. Please include a phone number where you can be reached.

Jim Butcher

IN MEMORIAM

Morton Beroza

Morton Beroza, 93, a retired ARS research chemist who specialized in insect and pest control, died Jan. 12 at the Riderwood Village retirement community in Silver Spring. He had Alzheimer's disease.

Beroza was one of the founders of FAR-B. He was one of six people who signed the Articles of Incorporation of FAR-B on December 2, 1985. When he retired from ARS he came on the Board of Directors in 1983. He served continuously in that capacity until 2007 when he was no longer able to attend board meetings due to the extensive care he provided his ailing wife.

Beroza worked at the USDA from 1948 to 1974 and retired as chief of the ARS Organic Chemicals Synthesis Laboratory. He spent much of his retirement as a consultant to the USDA and companies. Earlier he worked as a Science Aide for the US Food and Drug Administration, Washington, DC (1939 to 1943) and as a chemical engineer for the Naval Ordnance Laboratory in White Oak, Md. (1946 to 1948).

He contributed to hundreds of scientific publications and held 30 patents. In 1997, he was inducted into the ARS Science Hall of Fame, which cited his "international reputation for discovering ingenious and inventive tools for controlling insect pests safely within their ecological domain."

"He developed many environmentally compatible insect control strategies using insect lures, attractants, repellents, and pheromones," the citation added. "Beroza invented analytical techniques and apparatus now used by chemists worldwide."

Beroza was the recipient of many other awards, including the International Award for Research in Pesticide Chemistry from the American Chemical Society, 1977; the Gold Medal award for out-

standing achievement in environmental chemistry from the Synthetic Organic Chemical Manufacturers Association, 1973; the Harvey W. Wiley award in analytical chemistry from the Association Official Analytical Chemists, 1970; an award in Chromatography and Electrophoresis from the American Chemical Society, 1969; the Hillebrand prize from the Chemical Society Washington, 1963; the Distinguished Scientist award from the Friends of Agricultural Research, 1993; and the Sterling B. Hendricks Award from the American Chemical Society and USDA, 1998.

Morton Beroza was a native of New Haven, Conn., and a 1942 chemistry graduate of George Washington University. From Georgetown University, he received a master's degree in chemistry in 1946 and a doctorate in biochemistry in 1950. He was a Navy veteran of World War II.

Survivors include his wife of 64 years, Hannah Hurwitz Beroza of Riderwood Village; two children, Robert "Crispin" Beroza of Boyds and Rosalyn Beroza of Silver Spring; a sister; and five grandchildren.

Manya Stoetzel

Manya Brooke Stoetzel, 70, of St. Leonard and of Summerfield, Fla., died Sept. 13, 2010, at her residence in Summerfield. She was born April 11, 1940, in Houston, Tex., to the late Royce Lynn and Helen Eiker Brooke.

After graduation from Hillcrest High School in Dallas, Tex., she attended Rice University. However, it was at Iowa State University where her formal study of entomology, the study of insects, began. She transferred to Wisconsin State University, River Falls, where she met her husband, Faran Eugene Stoetzel. Mr. Stoetzel accepted a job with Dowell Schlumberger Corp. in 1961 and the newlywed couple moved to Venezuela where their first son, Frank Eiker Stoetzel was born in October 1962.

Returning to the United States, Mr. Stoetzel accepted a job in 1964 for the Bureau of the Census, Commerce Department in Jeffersonville, Ind. Their second son, Kevin Lynn Stoetzel, was born in August 1964 in Ind.

They moved to Maryland where she continued her studies in entomology, receiving her bachelor's degree in 1966, master's degree in 1970 and doctorate in 1972 from the University of Maryland. Her professional career spanned more than 30 years at the ARS Systematic Entomology Laboratory, where she provided systematic research and expertise on a variety of insect groups, including specializing in the biosystematics of aphids. She served as president of the Entomological Society of America in 1996. She was proud to be an entomologist and she met wonderful people during her career, including her mentor Louise Russell.

Since her retirement in 2002, she and her husband split their time between the family beach house they owned since 1976 in Long Beach, and their retirement home in Summerfield, Fla. She loved being a grandmother and spending holidays with her family. She will be remembered as a very loving and giving person who had a great sense of humor.

She is survived by her son, Kevin Lynn of Huntingtown; daughter-in-law, Felicia Marie of Huntingtown; grandchildren, Jack Thomas of Huntingtown and Nick Joseph of Huntingtown; two brothers, James Brooke of Aiken, S.C., and Ronald Brooke of Orlando, Fla.; and several other relatives.

Paul Doraiswamy

Paul Doraiswamy passed away May 8, 2010. Doraiswamy was a Meteorologist with the Beltsville Hydrology and Remote Sensing Laboratory, Animal & Natural Resources Institute, since 1988.

Doraiswamy had an illustrious career with ARS. His work has had a tremendous impact on the utilization of remote sensing research products by USDA agencies, specifically the Foreign Agriculture Service (FAS), National Agricultural Statistical Service (NASS), and the Natural Resources Conservation Service. These agencies are using his research results dealing with crop condition and yield estimation, land use evaluation, and the impact of agricultural management practices on soil carbon

sequestration.

Doraiswamy was recognized internationally as an authority on the application of satellite technology for agriculture. His accomplishments include being one of the first to demonstrate the application of NASA satellite sensor technologies for crop condition and yield assessments and management of nitrogen fertilizer applications. He pioneered procedures for integrating biophysical parameters from satellite images with crop simulation models. Doraiswamy developed an operational Geographical Information System-based algorithm with satellite data to map biweekly changes in crop development and conditions on a regional basis. Doraiswamy's crowning achievement was the development of an operational crop condition and yield modeling system that both FAS and NASS now use as part of their operational programs for assessing corn, soybean, wheat yield and production in the U.S and world-wide.

Doraiswamy had important leadership roles as a member of the USDA Coordination Committee for Remote Sensing and USDA Weather and Climate Coordination Committee. In 1999, he was elected Coordinator for Remote Sensing Activities of the U.N. Commission for Agricultural Meteorology, World Meteorological Organization (WMO), and elected a member of the Database Management Working Group of the U.N. Commission for Agricultural Meteorology, WMO. In 2004 he was awarded the Federal Laboratory Consortium Mid-Atlantic Regional Excellence in Technology Transfer Award for work entitled "A Real Time Assessment System for Spring Wheat Production in Siberia." In 2009, he was again awarded the Federal Laboratory Consortium Mid-Atlantic Regional Excellence in Technology Transfer Award for the work entitled "Development of an Operational System for Regional Crop Production Assessment."

Paul Doraiswamy is survived by his wife, Sundari Doraiswamy, children, Vijay Doraiswamy (daughter-in-law Purvi Doraiswamy), Ranjit Doraiswamy, and Vikram Doraiswamy, his mother, Sarojini Doraiswamy, and his sisters, Melly Swamidas, Rita Das, Marjorie Ebenezer, Pamela Asthana, and Merlyn Vemury.

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First Class

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